Facility: LaSalle		Date of Exam:Nov 13-24, 2000						Exam Level: RO					
Tier	Group	K/A Category Points											Point Total
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	
1. Emergency & Abnormal Plant Evolutions	1	2	3	3				4	1			0	13
	2	3	3	4				4	3			2	19
	3	2	1	0				1	0			0	4
	Tier Totals	7	7	7				9	4			2	36
2. Plant Systems	1	4	2	3	2	3	2	3	3	2	2	2	28
	2	2	2	2	2	2	1	2	2	1	3	0	19
	3	1	0	0	1	0	0	1	1	0	0	0	4
	Tier Totals	7	4	5	5	5	3	6	6	3	5	2	51
3. Generic Knowledge and Abilities		Cat 1			Cat 2			Cat 3			Cat 4		13
		3			4			3			3		

Note:
1. Ensure that at least two topics from every K/A category are sampled within each tier (i.e., the "Tier Totals" in each K/A category shall not be less than two).
2. Actual point totals must match those specified in the table.
3. Select topics from many systems; avoid selecting more than two or three K/A topics from a given system unless they relate to plant-specific priorities.
4. Systems/evolutions within each group are identified on the associated outline.
5. The shaded areas are not applicable to the category/tier.
6.* The generic K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system.
7. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings for the SRO license level, and the point totals for each system and category. K/As below 2.5 should be justified on the basis of plant-specific priorities. Enter the tier totals for each category in the table above.

Facility: [illegible]

BWR R[illegible]amination Outline

Printed: 06/0[illegible]0

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-2

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295005	Main Turbine Generator Trip / 3				X			AA1.02 - RPS	3.6	1
295006	SCRAM / 1				X			AA1.01 - RPS	4.2*	1
295007	High Reactor Pressure / 3		X					AK2.01 - Reactor/turbine pressure regulating system	3.5	1
295007	High Reactor Pressure / 3					X		AA2.02 - Reactor power	4.1*	1
295009	Low Reactor Water Level / 2			X				AK3.01 - Recirculation pump run back: Plant-Specific	3.2	1
295010	High Drywell Pressure / 5		X					AK2.04 - Nitrogen makeup system: Plant-Specific	2.6	1
295010	High Drywell Pressure / 5			X				AK3.03 - Radiation level monitoring	3.2	1
295014	Inadvertent Reactivity Addition / 1	X						AK1.01 - Prompt critical	3.7	1
295015	Incomplete SCRAM / 1	X						AK1.02 - Cooldown effects on reactor power	3.9	1
295015	Incomplete SCRAM / 1			X				AK3.01 - Bypassing rod insertion blocks	3.4	1
295025	High Reactor Pressure / 3				X			EA1.01 - Main steam line drains	2.9	1
295037	SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1		X					EK2.14 - RPIS: Plant-Specific	3.6	1
500000	High Containment Hydrogen Concentration / 5				X			EA1.03 - Containment Atmosphere Control System	3.4	1

K/A Category Totals: 2 3 3 4 1 0 **Group Point Total:** 13

Facility: LaSalle

BWR R[illegible] amination Outline

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ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-2

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295001	Partial or Complete Loss of Forced Core Flow Circulation / 1		X					AK2.02 - Nuclear boiler instrumentation	3.2	1
295001	Partial or Complete Loss of Forced Core Flow Circulation / 1					X		AA2.06 - Nuclear boiler instrumentation	3.2	1
295003	Partial or Complete Loss of A.C. Power / 6						X	2.1.28 - Knowledge of the purpose and function of major system components and controls.	3.2	1
295003	Partial or Complete Loss of A.C. Power / 6					X		AA2.03 - Battery status: Plant-Specific	3.2	1
295008	High Reactor Water Level / 2				X			AA1.09 - Ability to drain: Plant-Specific	3.3	1
295016	Control Room Abandonment / 7				X			AA1.01 - RPS	3.8	1
295017	High Off-Site Release Rate / 9		X					AK2.08 - SPDS/ERIS/CRIDS/GDS	2.8	1
295017	High Off-Site Release Rate / 9			X				AK3.01 - System isolations	3.6	1
295020	Inadvertent Containment Isolation / 5	X						AK1.02 - Power/reactivity control	3.5	1
295020	Inadvertent Containment Isolation / 5			X				AK3.02 - Drywell/containment pressure response	3.3	1
295026	Suppression Pool High Water Temperature / 5	X						EK1.01 - Pump NPSH	3.0	1
295028	High Drywell Temperature / 5						X	2.4.18 - Knowledge of the specific bases for EOPs.	2.7	1
295030	Low Suppression Pool Water Level / 5	X						EK1.03 - Heat capacity	3.8	1

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-2

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295033	High Secondary Containment Area Radiation Levels / 9			X				EK3.05 - †Emergency plan	3.6	1
295034	Secondary Containment Ventilation High Radiation / 9		X					EK2.06 - PCIS/NSSSS: Plant-Specific	3.9	1
295038	High Off-Site Release Rate / 9				X			EA1.02 - †Meteorological instrumentation	3.0*	1
295038	High Off-Site Release Rate / 9					X		EA2.04 - Source of off-site release	4.1*	1
600000	Plant Fire On Site / 8			X				AK3.04 - Actions contained in the abnormal procedure for plant fire on site	2.8	1
600000	Plant Fire On Site / 8				X			AA1.08 - Fire fighting equipment used on each class of fire	2.6	1

K/A Category Totals: 3 3 4 4 3 2 **Group Point Total:** 19

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 3

Form ES-401-2

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295021	Loss of Shutdown Cooling / 4	X						AK1.04 - Natural circulation	3.6	1
295023	Refueling Accidents / 8		X					AK2.07 - Standby gas treatment/FRVS	3.6	1
295032	High Secondary Containment Area Temperature / 5				X			EA1.05 - Affected systems so as to isolate damaged portions	3.7	1
295036	Secondary Containment High Sump/Area Water Level / 5	X						EK1.01 - Radiation releases	2.9	1

K/A Category Totals: 2 1 0 1 0 0 **Group Point Total:** 4

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Facility: LaSalle

ES - 401 **Plant Systems - Tier 2 / Group 1** **Form ES-401-2**

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
201001	Control Rod Drive Hydraulic System / 1	X											K1.10 - Control rod drive mechanisms	2.8	1
202002	Recirculation Flow Control System / 1		X										K2.02 - Hydraulic power unit: Plant-Specific	2.6	1
202002	Recirculation Flow Control System / 1								X				A2.07 - Loss of feedwater signal inputs: Plant-Specific	3.3	1
203000	RHR/LPCI: Injection Mode (Plant Specific) / 2								X				A2.17 - Keep fill system failure	3.3	1
203000	RHR/LPCI: Injection Mode (Plant Specific) / 2										X		A4.02 - System valves	4.1*	1
209001	Low Pressure Core Spray System / 2		X										K2.02 - Valve power	2.5*	1
209001	Low Pressure Core Spray System / 2							X					A1.03 - Reactor water level	3.8	1
209002	High Pressure Core Spray System (HPCS) / 2				X								K4.07 - Override of reactor water level interlock: Plant-Specific	3.5	1
211000	Standby Liquid Control System / 1					X							K5.06 - Tank level measurement	3.0	1
211000	Standby Liquid Control System / 1			X									K3.02 - Core spray line break detection system: Plant-Specific	3.0*	1
212000	Reactor Protection System / 7	X											K1.10 - Main turbine	3.2	1
212000	Reactor Protection System / 7				X								K4.02 - The prevention of a reactor SCRAM following a single component failure	3.5	1

Facility: LaSalle

ES - 401 **Plant Systems - Tier 2 / Group 1** **Form ES-401-2**

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
215003	Intermediate Range Monitor (IRM) System / 7								X				A2.07 - Failed recorder	2.5	1
215003	Intermediate Range Monitor (IRM) System / 7											X	2.2.22 - Knowledge of limiting conditions for operations and safety limits.	3.4	1
215004	Source Range Monitor (SRM) System / 7									X			A3.01 - Meters and recorders	3.2	1
215005	Average Power Range Monitor/Local Power Range Monitor System / 7					X							K5.04 - LPRM detector location and core symmetry	2.9	1
216000	Nuclear Boiler Instrumentation / 7						X						K6.02 - D.C. electrical distribution	2.8	1
216000	Nuclear Boiler Instrumentation / 7									X			A3.01 - Relationship between meter/recorder readings and actual parameter values: Plant-Specific	3.4	1
218000	Automatic Depressurization System / 3											X	2.1.28 - Knowledge of the purpose and function of major system components and controls.	3.2	1
223001	Primary Containment System and Auxiliaries / 5			X									K3.01 - Secondary containment	3.6	1
223002	Primary Containment Isolation System/Nuclear Steam Supply Shut-Off / 5						X						K6.06 - Various process instrumentation	2.8	1
239002	Relief/Safety Valves / 3							X					A1.05 - Reactor water level	3.7	1

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ES - 401 **Plant Systems - Tier 2 / Group 1** **Form ES-401-2**

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
241000	Reactor/Turbine Pressure Regulating System / 3	X											K1.08 - Control/governor valves	3.6	1
259001	Reactor Feedwater System / 2					X							K5.03 - Turbine operation: TDRFP's-Only	2.8	1
259001	Reactor Feedwater System / 2							X					A1.06 - Feedwater heater level	2.7	1
259002	Reactor Water Level Control System / 2			X									K3.07 - Reactor water level indication	3.4*	1
264000	Emergency Generators (Diesel/Jet) / 6	X											K1.04 - Emergency generator cooling water system	3.2	1
264000	Emergency Generators (Diesel/Jet) / 6										X		A4.01 - Adjustment of exciter voltage	3.3	1
K/A Category Totals:		**4**	**2**	**3**	**2**	**3**	**2**	**3**	**3**	**2**	**2**	**2**	**Group Point Total:**		**28**

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ES - 401 **Plant Systems - Tier 2 / Group 2** **Form ES-401-2**

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
204000	Reactor Water Cleanup System / 2									X			A3.03 - Response to system isolations	3.6	1
214000	Rod Position Information System / 7					X							K5.01 - Reed switches	2.7	1
215002	Rod Block Monitor System / 7		X										K2.03 - APRM channels: BWR-3, 4, 5	2.8	1
215002	Rod Block Monitor System / 7		X										K2.01 - RBM channels: BWR-3, 4, 5	2.5*	1
226001	RHR/LPCI: Containment Spray System Mode / 5			X									K3.01 - Containment/drywell/suppression chamber pressure	3.6	1
230000	RHR/LPCI: Torus/Suppression Pool Spray Mode / 5	X											K1.05 - A.C. electrical	3.2	1
230000	RHR/LPCI: Torus/Suppression Pool Spray Mode / 5							X					A1.10 - System lineup	3.7	1
239001	Main and Reheat Steam System / 3				X								K4.02 - Automatic isolation and opening of drain valves: Plant-Specific	3.1	1
245000	Main Turbine Generator and Auxiliary Systems / 4										X		A4.07 - Turbine valve position	2.9	1
262001	A.C. Electrical Distribution / 6										X		A4.05 - Voltage, current, power, and frequency on A.C. buses	3.3	1
262002	Uninterruptable Power Supply (A.C./D.C.) / 6						X						K6.01 - A.C. electrical power	2.7	1

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ES - 401 **Plant Systems - Tier 2 / Group 2** **Form ES-401-2**

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
262002	Uninterruptable Power Supply (A.C./D.C.) / 6	X											K1.02 - RFPT control: Plant-Specific	2.8	1
263000	D.C. Electrical Distribution / 6					X							K5.01 - Hydrogen generation during battery charging	2.6	1
271000	Offgas System / 9										X		A4.01 - Reset system isolations	2.8	1
271000	Offgas System / 9							X					A1.12 - Process radiation monitoring indications	3.1	1
286000	Fire Protection System / 8			X									K3.02 - Personnel protection	3.2	1
290003	Control Room HVAC / 9				X								K4.01 - System initiations/reconfiguration: Plant-Specific	3.1	1
290003	Control Room HVAC / 9								X				A2.02 - Extreme environmental conditions	3.1	1
300000	Instrument Air System (IAS) / 8								X				A2.01 - Air dryer and filter malfunctions	2.9	1

K/A Category Totals: **2 2 2 2 2 1 2 2 1 3 0** **Group Point Total:** **19**

Facility: LaSalle

ES - 401 **Plant Systems - Tier 2 / Group 3** **Form ES-401-2**

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
233000	Fuel Pool Cooling and Clean-up / 9							X					A1.01 - Surge tank level	2.6	1
288000	Plant Ventilation Systems / 9	X											K1.06 - Plant air systems	2.7	1
290002	Reactor Vessel Internals / 5								X				A2.05 - †Exceeding thermal limits	3.7	1
290002	Reactor Vessel Internals / 5				X								K4.01 - 2/3 core coverage following a DBA LOCA	3.7	1
K/A Category Totals:		**1**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**		**Group Point Total:**	**4**

Generic Knowledge and Abilities Outline (Tier 3)

Printed: 06/05/20

BWR RO Examination Outline

Form ES-401-5

Facility: LaSalle

Generic Category	KA	KA Topic	Imp.	Points
Conduct of Operations	2.1.25	Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data.	2.8	1
	2.1.7	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.	3.7	1
	2.1.21	Ability to obtain and verify controlled procedure copy.	3.1	1
			Category Total:	**3**
Equipment Control	2.2.12	Knowledge of surveillance procedures.	3.0	1
	2.2.28	Knowledge of new and spent fuel movement procedures.	2.6	1
	2.2.26	Knowledge of refueling administrative requirements.	2.5	1
	2.2.13	Knowledge of tagging and clearance procedures.	3.6	1
			Category Total:	**4**
Radiation Control	2.3.9	Knowledge of the process for performing a containment purge.	2.5	1
	2.3.2	Knowledge of facility ALARA program.	2.5	1
	2.3.11	Ability to control radiation releases.	2.7	1
			Category Total:	**3**
Emergency Plan	2.4.6	Knowledge symptom based EOP mitigation strategies.	3.1	1
	2.4.17	Knowledge of EOP terms and definitions.	3.1	1
	2.4.12	Knowledge of general operating crew responsibilities during emergency operations.	3.4	1
			Category Total:	**3**
			Generic Total:	**13**